4: Richter M, G-5 (ca. 1856-1870) 1870 AW5 Coorg AW5

masts. By its side may be seen the black Dammer tree or (*Can.*) Dúppa-mara (Canarium strictum) which attains a great height and may be recognised at a distance by the peculiar red colour of its foliage. The resin obtained from this tree has a brilliant black lustre, when adhering to the ash colored bark, but when held up to the light, it is of a rich brownish yellow tint.

Another resin producing tree is the white Dammer tree (Vateria indica). When an incision is made into the bark of this tree and fire applied to it, the charred trunk yields an increased quantity of the fluid resin.

The Calophyllum inophyllum or Alexandrian Laurel supplies a fragrant resin, and from the seeds is extracted by pressure the Pinnay oil of commerce.

The beautiful order *Guttifera* is also frequently represented by at least 2 species. The *Garcinia pictoria* yields a very superior kind of gamboge, and the other species an inferior sort. The gamboge is obtained from the fruit of the tree by pressure and maceration. A very common tree of the dense forest is the wild cinnamon (Cinnamomum iners) the bark of the branches of which is supposed to form part of the Cassia bark of commerce.

The following trees are noted for the excellence of their timber or other useful qualities: The Sampige—(Champak) Michelia champaca—with its beautiful and sweet scented flowers; the perfection of beauty in the poetical fancy of the Coorg bard, the Ebony—(Diospyros ebenaster) *Can.* Kari-mara, the Wood-oil tree (Dipterocarpus laevis), the Kanagala tree (Dillenia pentagyna), the Jack tree (Artocarpus integrifolius—*Can.* Halasina-mara). The Iron wood (mesua ferrea) with large white fragrant flowers and very hard wood; the Indian Mahogany or White Cedar (Cedrela toona—*Can.* Bellandi-mara), the Red Cedar or Chittagong wood (Chickrassia tabularis), the timber of both trees is little inferior to Mahogany; the wild

4: Richter M, G-5 (ca. 1856-1870) 1870 AW5 Coorg AW5

Nutmeg (Myristica); the wild Cashew-nut (Anacardium occidentale—*Can.* Géru-mara); the Indian Gutta tree (Isonandra acuminata), a large tree with beautiful foliage and oil yielding nuts; the Bastard Sago (Caryota urens—*Can.* Beini-mara) from which an agreeable toddy is drawn while from the pith sago may be prepared; the Hog-plum tree (Spondias mangifera—*Can.* Ambatte-mara); the wild clove tree (Eugenia).

A most remarkable and truly majestic forest tree is the Lepurandra Saccidora, which deserves to be classed with Thomson's

> "Lofty trees, to ancient song unknown,
> The noble sons of potent heat and floods
> Prone-rushing from the clouds."

It flowers in October in very peculiar catkins, something like a common mulberry. The fruit is in size and shape like a small fig, covered with a beautiful purple coloured down. The Coorgs manufacture very curious sacks from the bark. A branch is cut corresponding to the length and diameter of the sack wanted. It is soaked a little and then beaten with clubs until the liber separates from the wood. This done, the sack formed of the bark is turned inside out and pulled down close to the extremity, where the wood is cut off leaving a thin piece to form the bottom of the sack. These sacks were formerly much used for carrying rice, some of them may be seen in the Mysore Museum. Very different in size, but of far greater importance than the sack tree, is the Poison-nut tree,—"Strychnos nux vomica"—which may be found near it. The wood of this tree is hard and durable, its leaves oval and glossy; the small greenish white flowers appear in February; the fruit is of the size of an orange and in its white harmless pulp are embedded many round flat seeds, from which the powerful poison "Strychnine" is obtained. On open sunny woodsides grow Lobelia nicotianifolia, a stout annual plant with showy white flowers in terminal racemes,

4: Richter M, G-5 (ca. 1856-1870) 1870 AWS Coorg AWS

137 and the Brambles: Rubus Lasiocarpus or country raspberry,
R. Rugosus a scandent, prickly shrub and R. Wallichiana
[245] which yields a delicious fruit. The Conocephalus nivens
[314] appears here in great abundance, and proves a troublesome
weed on some coffee plantations. Its stem yields a beautiful
fibre much resembling that of the Rheea or China grass plant.

The forests in the Ghat region are so dense and tangled by thorny underwood and creepers, that they can only be penetrated by beaten paths and under the guidance of one familiar with their formidable mazes. The many densely shaded mountain rills and torrents are generally lined with a great variety of ferns, prominent amongst which is the stately *Tree fern*. In other places delicate reeds (Wotte) stud the more humid banks of streams. Stout ratans with terrible spines and slender flagelli lashing the air to keep, as it were, intruders at a distance, climb in all directions and surmount with their feathery leaves the highest trees. Favored by the constantly moist atmosphere the stems of many of the trees are speckled with lichens or covered with rare orchids, mosses, and other parasites especially the Mandali-parasite with its large glossy leaves, irregularly cut on one half of the limb. Festoons of wild pepper and gigantic creepers, which again support the more slender herbaceous vines of Convolvulus, Thimbergia,[2A] Ipomoea, &c. stretch from tree to tree in the most fantastic interlacings and gorgeously decorate the grand timber trees verdant with their foliage and many hued flowers.

[134] The soil, almost everywhere covered with a humid rich stratum of vegetable mould, highly favors the growth of moisture-loving plants, such as the Indian Arrowroot (Curcuma angustifolia), the long rooted Turmeric (Curcuma longa), the Wild Ginger (Zingiber cassumunar) and especially the highly valued Cardamom.

Wherever the hills are denuded of forest, they are clothed

[2A] [Errata. This should read "Thunbergia".
See corrigenda sheet, Cat. 116, P. 493 — Analyst]

4: Richter M, G-5 (ca. 1856-1870) 1870 AWS Coorg AWS

137 card cases, paper cutters, fans, walking sticks, etc. which are
313 made chiefly in Nuggur and North Canara. Sandal-wood is
[322] also a Government monopoly and is collected at an expense
[655] of one eighth of the value of the wood, trees when from 16 to 40 years old according to the nature of the soil, where grown, are cut down; the best yield a billet of 5 inches square
[652] and 4 or 5 feet long. The wood fetches at the public auctions
[437] periodically held by Government at the cotics or wood stores,
[439] from 70 to 98 Rupees per candy of 550 avoirdupois, and is generally exported to Bombay. Natives distinguish 3 kinds according to colour: the "red sandal" (srigandā) which is the most highly scented, the "yellow sandal" (arasana ganda), and the "white sandal" (bili ganda) which possesses but a faint
● 314 aroma and is least prized. The chips are burnt as perfume,
[302] or reduced to powder which enters into the composition for marking the foreheads of natives. The roots, containing the
[303] greatest amount of the essential oil, are chiefly used for its production. It is heavier than water and yields an excellent
245 perfume. The sandal tree is propagated from seed and suckers, springing up from the roots.

137 A stately though not very valuable tree all over these
313 parts of the country is the *Wild Mango tree*, which towers with its lofty crown far above its humbler neighbours. But the giant of these jungles is the *Ajini* or *Wild Jack tree* (Artocarpus hirsuta), the timber of which is most useful for house and ship building. The rosy-tinted, smooth-barked *Bee-teak* or Nandi (Lagerstroemia parviflora) is reputed for its excellent timber.

137 A splendid jungle tree, when in flower in February and
314 March, is the *Red Cotton tree* or Bombax Malabaricum a very large specimen, stands in front of the Anandapur Mission Church. Its flowers are large and of a deep red colour, and the many seeded capsules contain a silky cotton, which is employed for stuffing pillows and mattresses. The staple is

4: Richter M, G-5 (ca. 1856-1870) 1870 AW5 Coorg.AW5

so short as to render this so-called cotton commercially valueless. The wood is soft and spongy and of little value. Another red cotton tree of smaller size and with a prickly trunk is the Salmalia Malabarica (*Can.* Mulu yelava). The Dindul or "Conocarpus latifolius" is a fine timber tree and very frequent in the deciduous jungles. The heart-wood is of a chocolate colour and exceedingly durable. The Kurubas use it for axe-handles. When burning it emits an intense and sustained heat and is therefore highly prized for lime kilns and distilleries. The *Hedde-mara* or "Nauclea cordifolia" yields a beautiful close-grained wood resembling box; but it cannot withstand exposure to damp. Its small yellow flowers appear in November and December. The "Rottleria tinctoria" furnishes an orange dye—the kapela ranga. The *Soap-nut tree* (sapindus) which is here rather common, produces a small fruit, the pulp of which is saponaceous and used by the natives for washing. For marking their cotton clothes the pure black acrid juice of the shell of the "marking nut" is used; it is the fruit of a tree about 50 feet high, the Semecarpus Anacardium. The native ink is chiefly manufactured with the fruit or galls of the Alali-mara and sulphate of iron. This tree, the Terminalia chebula, yields excellent galls produced by insects puncturing the tender leaves. The astringent nuts bruised and mixed with molasses and chunam produce a very strong mortar. They are also largley used for tannin purposes.

On the outskirts of bamboo jungles the *Indian Coral tree* (Erythrina Indica) with its brilliant scarlet flowers may be frequently found; its soft wood is much used for toys. On account of its prickly bark the branches make good fences, and where the betel vine is cultivated this tree offers an excellent support. A very pretty tree with spreading pinnate foliage and gooseberry like seeds is the *Nelli-kai-mara* or "Emblica Officinalis." The fruit though hard is welcome to many for its thirst assuaging properties. Sometimes it is Preserved in Sugar.

4: Richter M, G-5 (ca. 1856-1870) 1870 AW5 Coorg AW5

preserved in sugar. The Bastard Teak (Butea frondosa), though common, is a very beautiful tree when in flower. Its scarlet flowers dye cotton yellow, and from the bark when cut a gum "Palas-kino" is obtained. A fragrant resin called "Kundricum" is furnished by the Gugula-mara (Boswellia glabra) an erect tall tree covered with greenish ash-coloured bark.

On the table-land of Mercara the Kake-mara or the Coorg Laburnum (Cathartocarpus fistula) is particularly conspicuous in April and May by its beautiful long pendulous racemes of yellow flowers. Its long cylindric legumes of dark brown colour and nearly 2 feet in length contain a mucilaginous pulp, which is a valuable laxative when mixed with Cassia. On the same plateau is found the American Aloe (Agave Americana) with its high flower stem and long thick leaves, which might be turned into excellent fibre, but beyond a few experiments no manufacture is carried on. The plant serves for making fences only. It has been superseded, however, by the Lantana shrub (Lantana Aculeata), which within a few years has spread over the whole of Coorg. Its square stem and branches are prickly, its ovate leaves when bruised have a strong smell of black currants, and its orange coloured flowers are more or less in blossom throughout the year, and the shrub when kept within proper bounds makes an excellent fence. But this plant whose vitality is most obstinate, threatens to overrun many a tract of land in Coorg and elsewhere that might be far more profitably occupied. The recognised necessity of shading exposed coffee plantations has brought to notice a tree, chiefly distinguished for its quick growth and shady crown—the *Charcoal tree* (Spones Wightii) It springs up spontaneously on every new clearing after the burn and mostly so in the eastern districts. Its wood produces a fine charcoal and its bark an excellent fibre. For beauty of shape and foliage the solitary *Nela-madina-mara*

4: Richter M, G-5 (ca. 1856-1870) 1870 AWS Coorg AWS

(Xanthochymus pictorius?) forms a striking contrast to the former. Its branches commence near the ground, and covered with elongated dark green glossy leaves form as they ascend a gently inclined cone. The fruit of the size of an orange and beautifully yellow is rather acid, but it is eagerly sought after and eaten by the natives.

A graceful vegetable beauty of a different character is presented to view by the *Bilwára tree* (Mimosa) which with its spreading airy crown of tiny pinnate leaves and small white fragrant flowers is a graceful jungle ornament. The wood is very hard and strong. Near banks of streams and water courses the Coldera bush or *Fragrant Screwpine* (Pandanus odoratissimus) is commonly found and much used for making mats and umbrellas. In many arid places in the east and north of Coorg the *Dwarf date palm* (Phoenix farinifera) nearly monopolizes the ground. Its leaves are made into mats and baskets and from the small stem a farinaceous substance is prepared for food. A hillock of date palms before the hot season in January presents the appearance of, what we hope may be a thing of the past, a bored coffee estate.

At Fraserpet in the compound of the Coorg Superintendent's Bungalow there are a few trees of the valuable *Divi-divi* or Shumach tree (Cæsalpinia Coriaria). It is a small umbrageous tree and would do very well for coffee-shading, and its incurved oblong pods contain about 50 per cent of tannin, the price of which varies in Europe from £8 to £13 a ton, so that its cultivation might pay as a commercial enterprise.

Thus these eastern jungles contain a number of useful trees. I would now add a few trees, growing in the open, but thriving re.....kably well in Coorg, viz: the several representatives of the Ficus tribe, especially the Banian tree (Ficus Indica), of which there are some beautiful specimens near

4: Richter M, G-5 (ca. 1856-1870) 1870 AW5 Coorg AW5

137 Fraserpet to which the elegant lines of Southey so truly apply:—

"It was a goodly sight to see
That venerable tree.
For over the lawn irregularly spread,
Fifty straight columns propt its lofty head;
And many a long depending shoot,
Seeking to strike its root,
Straight like a plummet, grew towards the ground,
Some on the lower boughs, which crost their way,
Fixing their bearded fibres, round and round,
Some to the passing wind at times, with sway
Of gentle motion swang.
Others of younger growth, unmoved, were hung
Like stone drops from the cavern's fretted height.
Beneath was smooth and fair to sight,
Nor weeds nor briars deformed the natural floor
And through the leaf-cope which bower'd it over
Came gleams of checkered light.
So like a temple did it seem, that there
A pious heart's first impulse would be prayer."

(*The Curse of Kehama*, Book 13.)

The *Pippal* (Ficus religiosa) is likewise a large tree and found nearly in every temple in Coorg, but growing best in the drier districts. This tree proves most destructive to neglected buildings; when once rooted in crevices, nothing can withstand its progress. More common than both preceding trees [262] is the *Atti-mara* or "Ficus glomerata" with fruit much like the common fig and which is eaten by the natives. The *Indian Caoutchouc tree* "Ficus elastica" also occurs and is [314] not only a useful but highly ornamental tree. The milky juice obtained from incisions into the bark is exposed to the air, when the *Caoutchouc* or elastic substance spontaneously separates, leaving a foetid whey-coloured liquid.

[655] Almost a stranger to Coorg and growing only in several places along the Káveri between Fraserpet and Sómawarpet,

4: Richter M, G-5 (ca. 1856-1870) 1870 AW5 Coorg AW5

To facilitate reference to the vegetable products of Coorg jungle trees and plants, they are here enumerated under the classification of 314

a. Gums. (soluble in water)—They are obtained from the cashew-nut tree (Anacardium occidentale), the Ambate-mara or hog-plum (Spondias mangifera), the Atti-mara (Ficus glomerosa), the Gambali-mara, the Halumatti-mara, the jack tree (Artocarpus hirsutus), the elephant or wood-apple tree (Feronia elephantum), the bastard teak (Butea frondosa) and the Babul tree (Acacia Arabica).

b. Caoutchouc—or elastic gum is supplied by "Ficus elastica" and "Isonandra acuminata".

c. Gum-resins—the produce of Garcinia pictoria (gamboge), Pterocarpus marsupium (kino), Boswellia glabra (kundricum), Odina wodier (odina gum), Neem tree and Bombax Malabaricum.

d. Oleo-resins—obtained from the Canarium strictum (black dammer), Shorea robusta (rál), Vateria Indica (Indian copal), Dipterocarpus laevis (wood-oil), Calophyllum Inophyllum and Terminalia coreacea.

e. Oils—extracted from the seeds of the Neem tree, the Alexandrian laurel, the Powali, the Nirala and the Kákornte tree.

f. Fibres—obtained from the Kóli, Antupurle, and Bendé-mara, the Indian fig, pippal, banyan and red wooded fig tree (Ficus racemosa), the variegated American aloe, the long aloe (Agave vivipera), the Indian hemp (Crotalaria Juncea), the bow-string hemp (Sanseviera zeilanica). The plantain (musa paradisiaca and textilis), the paddy straw (Oriza sativa), the mat-rush (Cyperus textilis), the broom grass (Aristida setacea), the cotton plant (Gossypium Herbaceum), the silk-cotton tree (Bombax Pentandrum), the Conocephalus nivens, the Sponia Wightii or Charcoal tree,

4: Richter M, G-5 (ca. 1856-1870) 1870 AWS Coorg AWS

•314 the Nerium grandiflorum and the Isora corylifolia or sham hazel.

g. Tannin—the produce of the bark of the Babool tree, the Neem tree, the Bauhinia variegata, the Buchanania latifolia, the Hymenodyction excelsum, of the pod of the Dividivi tree (Caesalpinia Coriaria), and of the nut of the Alalimara (Terminalia Chebula).

[386] *h. Dyes—Red*, obtained from the Rottleria tinctoria, the Indian madder (Hedyotis umbellata), Indian mulberry (Morinda citrifolia) the red sandal (Pterocarpus Santalinus). *Yellow*, from the bastard teak (Butea frondosa), the gamboge tree (Garcinia pictoria), the Xanthochymus pictorius and the Berberis tinctoria.

[388] *i. Saponaceous matter*—yielded by the bark of the Babool tree, the pods of Mimosa saponaria and the fruit of the Soapnut tree (Sapindus).

*136 *General fauna of Coorg*—It may be easily imagined, that a country, so well watered and wooded and with a vegetation abounding in nourishing produce, will sustain a great variety of animal life. This was still more the case ere the resounding axe of the planter and the still more frequent echo of the sportman's rifle have disturbed the animals' secluded abodes and driven them to remoter regions.

A brief grouping of the more prominent representatives of animal life in Coorg will be all that can be attempted within the small space allotted to the subject. Descending in the scale of zoological classification, it is the monkey tribe, that first claims our attention and there are 3 species for inspection: the black, the grey and the brown monkey. The black monkey or "Wanderoo" (Silenus veter. Linn)—*Kg.* Karingódo—is rather scarce and only found in the Male-kádu or Ghat forests. It has greyish whiskers, chest and belly, and is of small size. Its intelligent look and playful disposition render it a favorite with the natives, but like other monkeys,